CLAIMS

What is claimed is:

1. A method for adjusting engine power in response to a driver power request comprising the steps of:

(a) establishing a predetermined nominal engine power versus vehicle speed range;

(b) monitoring and comparing driver power requests to the nominal engine power versus vehicle speed range over time to determine a driver profile;

(c) determining at least one engine power correction factor based on the driver profile;

(d) initiating a subsequent engine power request; and

(e) applying the correction factor to available engine power to provide a modified engine power output.

2. The method of claim 1 wherein step (a) further includes the steps of dividing the vehicle speed range into a plurality of speed zones, establishing the nominal engine power versus vehicle speed range to extend through each of the speed zones, and sub-dividing each speed zone into an upper speed zone above the nominal engine power versus vehicle speed range and a lower speed zone below the nominal engine power versus vehicle speed range.

3. The method of claim 2 wherein step (b) further includes the steps of timing an amount of time that each driver power request remains in one of the upper or lower speed

zones for each of the speed zones to establish a plurality of zone times, measuring total engine running time, dividing each zone time by the total engine running time to determine a percentage of time spent in each zone, and determining the driver profile based on the percentage of time spent in each zone.

4. The method of claim 3 wherein determining at least one engine power correction factor in step (c) further includes the steps of determining a zone correction factor for each speed zone based on a comparison of the percentage of time spent in each zone for the respective upper and lower speed zones, comparing each zone correction factor to a predetermined zone constant, incrementing each zone correction factor by a first predetermined amount if the zone correction factor is greater than the predetermined zone constant, decrementing each zone correction factor by a second predetermined amount if the zone correction factor is less than the predetermined zone constant, and generating a modified zone correction factor based on the incremented or decremented zone factor.

5. The method of claim 4 wherein step (c) further includes the steps of determining a low speed gain and a high speed gain based on the modified zone correction factors.

6. The method of claim 5 wherein step (d) further includes the steps of determining an accelerator pedal position and determining a current engine speed in response to the engine power request, and determining available engine torque by comparing the pedal position and engine speed.

7. The method of claim 6 wherein step (e) further includes the steps of establishing a predetermined low vehicle speed value and a predetermined high vehicle speed value, modifying available engine torque by the low speed gain if current vehicle speed is less than the predetermined low vehicle speed value, modifying the available engine torque by the high speed gain if current vehicle speed is greater than the predetermined high vehicle speed value, and modifying the available engine torque by an interpolation of the low and high speed gains if the current vehicle speed is greater than the predetermined low vehicle speed value and less than the predetermined high vehicle speed value.

8. The method of claim 4 including the step of only determining the zone correction factor for each speed zone if the total engine running time is greater than a predetermined minimum amount of time.

9. A method for adjusting engine power in response to a driver power request comprising the steps of:

(a) establishing a predetermined nominal engine power versus vehicle speed range;

(b) monitoring and comparing driver power requests to the nominal engine power versus vehicle speed range over time to determine a driver profile;

(c) initiating an engine power request;

(d) determining an accelerator pedal position and a current engine speed in response to the engine power request;

(e) determining available engine torque by comparing the pedal position and engine speed;

(f) comparing current vehicle speed to at least one of a predetermined low vehicle speed value and a predetermined high vehicle speed value;

(g) determining a low speed engine power correction factor and a high speed engine power correction factor based on the driver profile; and

(h) modifying available engine torque by the low speed engine power correction factor if current vehicle speed is less than the predetermined low vehicle speed value, modifying the available engine torque by the high speed engine power correction factor if current vehicle speed is greater than the predetermined high vehicle speed value, and modifying the available engine torque by an interpolation of the low and high speed engine power correction factors if the current vehicle speed is greater than the predetermined low vehicle speed value and less than the predetermined high vehicle speed value.

10. The method of claim 9 further including the steps of dividing the vehicle speed range into a plurality of speed zones, establishing the nominal engine power versus vehicle speed range to extend through each of the speed zones, and sub-dividing each speed zone into an upper speed zone that is greater than the nominal engine power versus vehicle speed range and a lower speed zone that is less than the nominal engine power versus vehicle speed range.

11. The method of claim 10 further including the steps of timing an amount of time that each driver power request remains in one of the upper or lower speed zones for each of the speed zones to establish a plurality of zone times, measuring total engine running time, dividing each zone time by the total engine running time to determine a percentage of time spent in each zone, and determining the driver profile based on the percentage of time spent in each zone.

12. The method of claim 11 further including the steps of determining a zone correction factor for each speed zone based on a comparison of the percentage of time spent in each zone for the respective upper and lower speed zones, comparing each zone correction factor to a predetermined zone constant, incrementing each zone correction factor by a first predetermined amount if the zone correction factor is greater than the predetermined zone constant, decrementing each zone correction factor by a second predetermined amount if the zone correction factor is less than the predetermined zone constant, and generating a modified zone correction factor based on the incremented or decremented zone factor.

13. The method of claim 12 including the steps of determining the low speed engine power correction factor and the high speed engine power correction factor based on the modified zone correction factors.

14. An engine management system for adjusting engine power in response to a driver power request comprising:

an engine;

an accelerator pedal movable between a non-applied position and an applied position wherein said pedal generates an electronic signal to request engine power in response to being moved to the applied position;

a first sensor for measuring accelerator pedal position in response to an engine power request;

a second sensor for measuring current engine speed in response to the engine power request;

a third sensor for measuring vehicle speed during the engine power request; and

an electronic controller having a database including a predetermined nominal engine power versus vehicle speed range for the engine wherein said controller monitors and compares engine power requests to said nominal engine power versus vehicle speed range over time to determine a driver profile, determines available engine torque by comparing pedal position and current engine speed, determines a low speed engine power correction factor and a high speed engine power correction factor based on said driver profile, and modifies available engine torque by said low speed engine power correction factor if current vehicle speed is less than said predetermined low vehicle speed value, or modifies the available engine torque by said high speed engine power correction factor if current vehicle speed is greater than said predetermined high vehicle speed value, or modifies the available engine torque by an interpolation of said low and high speed engine power correction factors

if the current vehicle speed is greater than said predetermined low vehicle speed value and less than said predetermined high vehicle speed value.

15. The system of claim 14 wherein the vehicle speed range is divided into a plurality of speed zones with said nominal engine power versus vehicle speed range extending through each of said speed zones, and wherein each speed zone is sub-divided into an upper speed zone that is greater than the nominal engine power versus vehicle speed range and a lower speed zone that is less than the nominal engine power versus vehicle speed range.

16. The system of claim 15 including a timer for each of said upper and lower speed zones wherein each timer times an amount of time that each driver power request remains in said respective upper or lower speed zone to establish a plurality of zone times, and including an engine timer that measures total engine running time wherein said controller divides each of said zone times by said total engine running time to determine a percentage of time spent in each zone with said driver profile being based on said percentage of time spent in each zone.

17. The system of claim 16 wherein said controller determines a zone correction factor for each of said speed zones based on a comparison of said percentage of time spent in each zone for said respective upper and lower speed zones, compares each zone correction factor to a predetermined zone constant, increments each zone correction factor by a first predetermined amount if said zone correction factor is greater than said predetermined zone constant, decrements each zone correction factor by a second predetermined amount if said

zone correction factor is less than said predetermined zone constant, generates a modified zone correction factor based on the incremented or decremented zone factor, and determines said low speed engine power correction factor and said high speed engine power correction factor based on said modified zone correction factors.